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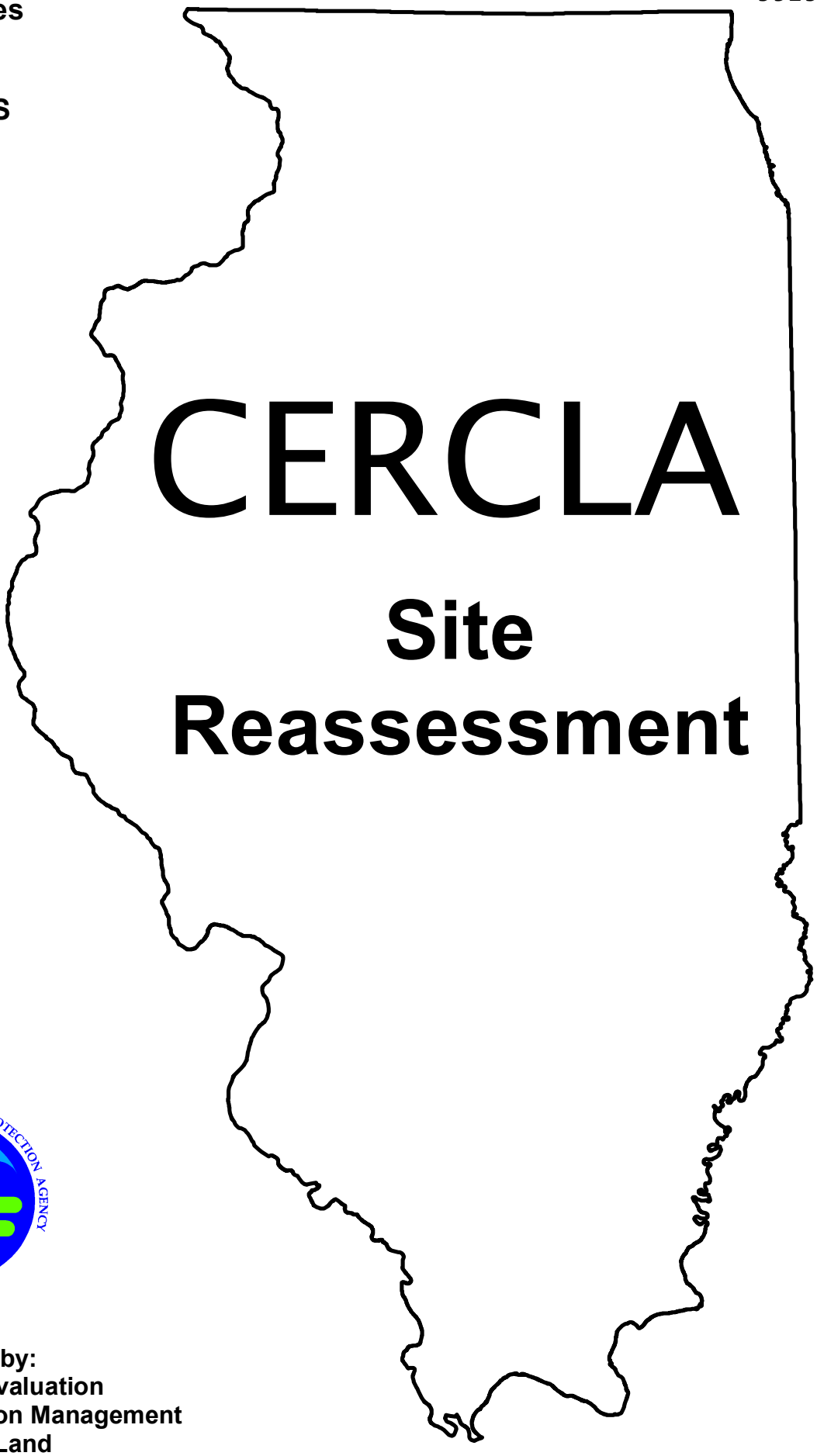
Taracorp Industries
Cook County
LPC 0311740007
SUPERFUND/ HRS
ILD 09883208



CERCLA

Site Reassessment

Prepared by:
Office of Site Evaluation
Division of Remediation Management
Bureau of Land

SITE REASSESMENT

REPORT

for:

TARACORP INDUSTRIES
McCook, Illinois
ILD 098983208
LPC 0311740007

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
DIVISION OF REMEDIATION MANAGEMENT
OFFICE OF SITE EVALUATION

September 21, 2017

SIGNATURE PAGE

Title: Site Reassessment for the Taracorp Industries Site

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Signature _____ Date 9/18/2017

The approval signatures on this page indicate that this document has been authorized for information release to the public through appropriate channels. No other forms or signatures are required to document this information release.

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Section 1.0 Introduction

On February, 26, 2013, the Illinois Environmental Protection Agency's (Illinois EPA) Office of Site Evaluation was tasked by the United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Site Reassessment (SR) at the Taracorp Industries, also known as (AKA) Continental Smelting, site in McCook, Cook County, Illinois (See Figure 1).

Current U.S. EPA policy stipulates that a Site Reassessment be conducted to determine the current status of the Taracorp site. The Site Reassessment will consist of an evaluation of recent information to determine if further Superfund investigations are warranted. The Site Reassessment will supplement previous work, and is not intended to replace previous CERCLA assessments.

The Site Reassessment is designed to evaluate recent information that will help determine if the site qualifies for possible inclusion on the National Priorities List (NPL), or should receive a No Further Remedial Action Planned (NFRAP) designation. At the conclusion of the reassessment process Illinois EPA will recommend that the site be given a NFRAP designation, receive further Superfund investigations, or referred to another state or federal cleanup program.

The Taracorp Industries site was initially placed on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database in

August of 1980. This action was in response to the State of Illinois concerns that past site activities may have caused soil contamination of the surrounding community.

The Site Reassessment Report will describe current site conditions and illustrate how the site has changed since the last CERCLA investigation in 1986. This report will contain a summary of existing information that will include site history, current site conditions, evaluate past analytical data, and evaluate past remedial activities. The Site Reassessment will also support emergency response or time-critical removal activities if they are warranted.

Section 2.0 Site Description and Operational History

Section 2.1 Site Description

The Taracorp Industries site is located at 7753 West 47th Street, in McCook, Cook County, Illinois (sec. 12, T. 38 N., R. 12 E.)(See Figure 2). Taracorp Industries ceased operations as a secondary lead smelter in 1983. The site is currently owned by MBT Transportation and previously by J&F Hauling. Both of these companies used the property for semi-truck parking and maintenance. The previous owner used the site to stockpile demolition debris until it was transported off site.

The land use surrounding the site is a mix of industrial, commercial, and residential areas. The southern perimeter is bordered by railroad tracks with a drainage ditch flowing between the railroad tracks and site. Salvage yards are situated on both the east and west

sides of the site. The nearest residential area is 200 feet to the north of the site and the population within one mile of the site is approximately 10,000 persons.

The site is situated on approximately 11 acres of flat land, and is mainly covered with gravel, and/or pavement. The Des Plaines River, the nearest surface water body, at its nearest point to the site, is located approximately 0.16 mile south of the site. Originally a ditch ran along the south perimeter of the site and terminated at the Des Plaines River. More recently two retention ponds have been created on-site and they are connected to the Des Plaines River via subsurface piping. The Chicago Sanitary and Ship Canal is located 0.47 miles south of the site but the confluence of it and the Des Plains River is approximately seven miles downstream of the site.

Two buildings are currently on-site, a large main operations/office building and a small pump house. It appears that these structures remain from the original facility. The site is completely surrounded by an eight foot fenced and gated.

Section 2.2 Operational History

Taracorp Industries operated as a secondary lead smelter from 1979 to 1983. This process consisted of recycling lead from scrap materials and battery plates to produce metallic lead ingots. The battery plates were purchased from off-site sources. This material was sent through the smelting process and allegedly no sulfuric acid was present on the plates so acid neutralization was not necessary. Battery plates and scrap material were stored in bins on a concrete pad within a storage shed. The material was

fed into the reverberatory furnace and smelted into lead bullion form. Pot furnaces were used to re-refine the bullion and produce lead ingots. The hot gasses from the reverberatory furnace were directed through a series of cyclones and then into a baghouse. Flue dust was conveyed back to the reverberatory furnace. During breakdown periods, the flue dust was stored in open-top bins in a roofed storage shed. Slag from the reverberatory furnace was allegedly the only waste generated from the lead smelting process. The slag contained lead and was shipped off site to other Taracorp facilities to be used in blast furnace operations. The slag was stored in the storage shed or in covered bins until shipment off-site.

Prior to Taracorp Industries ownership, the site was owned and operated by National Lead Industries, Inc. (NL Industries), who also operated the facility as a secondary lead smelter from the mid-1960s until it was sold in 1979.
In 1973, when the site was owned by NL Industries, the IEPA conducted a field inspection because of a citizen's complaint of an offensive sulfur odor emitted from the plant. The emissions were allegedly emanating from lead sulfate and sulfite on old battery plates that were reclaimed during process operations. In 1979, NL Industries sold the plant to Taracorp Industries. NL Industries filed a U.S. EPA 103(c) Notification of Hazardous Waste Site Form in 1980. This form is a direct source of waste quantity information and provides the amount and types of hazardous substances at the site. The author of this report was unable to locate the 103(c) form filed by NL.

During operations, the Taracorp Industries site was surrounded by an eight-foot

high cyclone fence and operated 24-hours a day. Buildings at the site include: a main office, a warehouse, a storage shed which is roofed and open on two sides, a production area which includes the reverberatory furnace, a screw conveyor, a cooling tower, two cyclones, and a baghouse. No aboveground or underground storage tanks were observed at this site during past state and/or federal investigations.

Taracorp Industries occupied the site from 1979 to 1983. In 1980, Taracorp Industries submitted the Part A Permit Application under the Resource Conservation and Recovery Act (RCRA) for storage of baghouse dust (Waste Code K069) in 55-gallon drums. In 1983, the facility ceased operations due the depressed market conditions for secondary lead ingot products. Approximately one year later, all materials were eventually removed from the site and the plant yard, buildings, walls, and baghouse were vacuum swept. This material was shipped off site for recycling. In December 1985, Taracorp Industries withdrew it RCRA application, stating that K069 baghouse dust once stored in a waste pile, is not a solid waste and was never discarded. In November 1987, the U.S. EPA withdrew its complaint against Taracorp Industries on the basis that material generated at the site was recycled back to the original production process and therefore, not a discarded material under RCRA.

Taracorp Industries did not have a National Pollutant Discharge Elimination System (NPDES) permit during its four years of operation.

On May 26, 1983, the Illinois EPA conducted a field inspection of the facility to document site conditions and collected two samples from the Taracorp Industries site: a dust sample from a storm sewer grate outside the storage shed area which detected a lead concentration over 400,000 milligrams per kilogram (mg/kg) and a water sample collected from ponded water inside the storage shed which detected 12.71 milligrams per liter (mg/L) of lead.

In the mid-1980s, the northern half of the property was leased to Moreco Energy, Inc. and used as a truck terminal and maintenance garage. The southern portion of the site was used for parking motor oil refining trucks. Trucks entering the site were usually empty. The used oil was loaded into tanks off site at Moreco's Refinery. The exact dates of Moreco's lease are unknown.

In the late-1980s, the site was leased to J&F Hauling, a construction demolition company. In 1990, the Taracorp Industries property was purchased by J&F Hauling and is listed as the current owner. No regulated wastes are used by J&F Hauling, nor are any special waste permits required under the current operations of the site.

Section 2.3 CERCLA Investigative History

In August 1984, the Illinois EPA performed a Preliminary Assessment (PA) at the Taracorp Industries facility. The inspectors noted ponding of water in the storage shed, also cracks and missing pieces of concrete in this storage shed. The IEPA

assigned a medium priority to this site because of the large population potentially affected and the presence of a school within 0.3 mile of the site.

On August 28, 1986, a U.S.EPA contractor conducted a Site Inspection (SI) and collected soil and surface water samples at the Taracorp Industries facility. The contractor did not find any conditions that would clearly indicate an emergency situation. A total of twelve samples were collected including one method blank. The soil samples were analyzed for total metals; in addition, two samples were analyzed for Extract Procedure (EP) toxicity metals.

The results from the SI indicated that the highest EP toxic for lead was 1,290 mg/L and for cadmium was 5.66 mg/L. The contractor determined that an immediate threat to the general population was low due to the inaccessibility of the site, however, heavy metal concentrations in the soil posed a threat to workers on site not utilizing proper respiratory protection. The potential existed for the migration of pollutants off site through wind and water erosion.

On September 9, 1986, additional CERCLA activities were conducted by another USEPA contractor, which included a site walk-through and interviews with a site representative. Photographs and visual observations of the site were made. It was found that Taracorp Industries had problems in the past with the Metropolitan Sanitary District of Greater Chicago (MSDGC) regarding lead contamination. According to an interview with the site representative, Taracorp Industries split samples with MSDGC, for chemical analysis and their samples showed lead concentrations to be in compliance with MSDGC regulations, the MSDGC samples

revealed noncompliance by a small margin. No sample locations or analytical data of this sample event were referenced by the contractor.

Section 3.0 Other Cleanup Authorities and Activities

There does not appear to have been any additional investigative activity at the site since the September 1986, Site Inspection. According to the current site owner, two or three years ago they were mandated by the MSDGC to update the drainage lines from their onsite retention basins.

Section 4.0 Site Reassessment Field Activities

On May 20th and 21st, 2014, the Illinois EPA conducted a Site Reassessment (SR) at the subject property which is currently owned and occupied by MTB Transportation. As stated earlier in this report, the purpose of the Site Reassessment is to describe current site conditions and illustrate how the site has changed since the last CERCLA investigation in 1986.

On May 7th, 2015, the residential neighborhood just north of the site was evaluated to determine if it has been impacted by past site activities.

Section 4.1 Soil Sampling Activities

Direct push technology was utilized to conduct 20, soil borings to a depth of four feet

below ground surface (See Figures 3). Soil brought to the surface was screened using X-ray Fluorescence (XRF) readings and laboratory samples were collected from nine locations to confirm the readings (See Figure 4).

X-ray Fluorescence (XRF) readings were also taken from the right of way area of 14 residential properties; just north of the site. Two background samples were collected from Emil Scheive Park, also located north of the site. Laboratory samples were also collected from these properties to confirm the XRF reading results (See Figure 5).

Section 4.2 Analytical Results

Laboratory analysis of the soil borings revealed that several locations had elevated lead levels; five of these locations exceed the industrial/commercial Removal Management Level for lead (See Table 1). These samples were collected from depths that ranged from six inches to two feet below ground surface (See Table 2). Laboratory analysis of the residential soil samples sent for laboratory confirmation revealed elevated lead levels, four of the five sample locations had levels significantly above the background levels found at Emil Scheive Park (See Table 3). All five of the residential sample locations had lead levels above the residential RML for lead. All of these samples were collected within 0-3 inches of the grounds surface and within 200 feet of an occupied residence (See Table 4).

Section 5.0 Source Discussion and Pathway Analysis

Section 5.1 Source Summary

This section includes descriptions of the various hazardous waste sources that have been identified at the Taracorp. The Hazard Ranking System defines a "source" as: "Any area where a hazardous substance has been stored, disposed or placed, plus those soils that have become contaminated from migration of hazardous of hazardous substance". This does not include surface water or sediments below surface water that become contaminated.

Information obtained during this investigation has identified the truck parking areas as a potential source of soil contamination. This area is approximately 11 acres in size and is classified as "contaminated soil" for CERCLA purposes.

The analytical results of this investigation indicated that the truck parking area is a potential source of soil contamination. The contaminant of concern associated with this source is primarily lead.

Section 5.2 Groundwater Pathway

This section discusses site-specific geology and soils, groundwater releases, and targets associated with the groundwater migration pathway at the site.

5.2.1 Geology and Soils

The Taracorp Industries site is located in a relatively flat area of greater Chicago. Lying beneath the site is 25 to 40 feet of unconsolidated glacial material. The glacial material is underlain by Silurian dolomite bedrock. The unconsolidated glacial deposits are primarily alluvial in origin and consist largely of fine grained clayey silts and silty sandy clays.

Groundwater aquifers in the area include the Shallow Dolomite Aquifer, mainly Silurian dolomite; the Cambrian-Ordovician Aquifer, in which the Ironton-Galesville and Glenwood-St. Peter Sandstones are the most productive units; and the Mt. Simon Aquifer, which consists of the Mt. Simon Sandstone and the basal sandstone of the Eau Claire Formation.

Shallow aquifers are connected hydrologically and are recharged directly through seepage and precipitation. They are separated by relatively impervious Maquoketa Group Shale from the Cambrian-Ordovician Aquifer.

The residents of the city of McCook obtain drinking water from a municipal system that draws water from Lake Michigan intakes, approximately 3 miles east of the site.

5.2.2 Groundwater Releases

A release of hazardous substances from the Taracorp Industries site to groundwater is unlikely based on site conditions at the time of the SSI. The baghouse dust generated at the site was recycled back into the smelting process, and during intermediate periods of shut down, the waste would be stored on a concrete pad in a storage shed. No

monitoring wells have been installed at the site to date; therefore, no groundwater data is available.

Section 5.3 Surface Water Pathway

The surface pathway starts where surface water run-off from the site enters the first perennial water body. This location is referred to as the probable point of entry (PPE). For the Taracorp site, the PPE is any point where site run-off enters the Des Plaines River. The Target Distance Limit (TDL) for this pathway is 15 miles downstream of the PPE (See Figure 6). Based on the below listed information no additional sampling occurred regarding this pathway.

According to a 1995 Site Inspection report the Des Plaines River is the nearest surface water body and the PPE to it is located approximately 0.16 miles south of the site. This water body is primarily use for recreational purposes and commercial shipping. The site is located outside the 100-year flood plain of Des Plaines River. No wetlands, sensitive environments, or drinking water intakes are known to exist along the 15 TDL along the Des Plaines River. The 1995 report also states that there a very low likely hood of a release to the Des Plaines River do to the contouring of the surface of the site. Apparently, during the operational years there were substantial berms located on the southern portion of the site near the Des Plaines River shoreline. Based on this information no additional sampling occurred regarding the surface water pathway.

Section 5.4 Soil Exposure Pathway

This pathway evaluates surficial contamination and the likelihood that people and sensitive environments will be exposed to them.

A release of hazardous substances from the Taracorp Industries site to surrounding soils is possible. During Taracorp Industries' four years of operation, as well as during NL Industries operation from the mid-1960s to 1979, the site used lead-bearing materials such as broken battery plates and casings as feedstock in the smelting process. Lead material may have migrated to the surrounding soils via movement of this material by equipment (i.e., front end loaders). These operations ceased over 30 years ago and site conditions have changed considerably since then.

Previous on-site sampling did find elevated lead and cadmium levels. Soil samples from 2014 found several locations that had elevated lead levels; six of these locations exceeded the Removal Management Level for lead. These samples were collected from depths that ranged from six inches to two feet below the grounds surface (See Tables 1 and 2).

On-site soils consist mostly of gravel with sand. The subsurface layer consists of unconsolidated glacial drift material consisting of gravel and silty clay. Access to the site is restricted by an eight foot high cyclone fence and after-hours access is controlled by a locked gate.

The frequent truck traffic does create localized “dust clouds” that possibly impact the drivers and/or on-site employees. This creates an occupational hazard more than an off-site environmental threat.

The residential samples/readings were collected from a depth of zero to three inches below the grounds surface. Several sample locations had elevated lead levels and five locations reported levels above a health based benchmark and significantly above the background level for lead. Laboratory samples were collected from four of these locations and confirmed the XRF lead readings (See Tables 3 and 4). Residential sampling results were sent to the Illinois Department of Public Health for evaluation. Their health consultation focuses on the threat to human health based on the contaminants found and the levels of them. The health consultation and the recommendations of it can be found in Appendix A.

Elevated levels of lead were found in both on-site samples and off-site residential samples. Five residential locations mentioned above meet the criteria for an observed release, while the levels of lead found at the other nine residential locations were not significantly above the background levels.

The nearest residential area is located less than 0.1 miles from the site; in addition, a school is located 0.3 miles from the site. No sensitive environments or wetlands exist within 4 miles of the site (See Figure 7).

Population between…	
0 – ¼ mile	**753**
¼ - ½ mile	**1,885**
½ - 1 mile	**9,099**
1 – 2 miles	**47,576**
2 – 3 miles	**83,520**
3 – 4 miles	**115,727**

Section 5.6 Air Pathway

Wind erosion of the surface soils is also minimal except during high winds due to the particle size and soil types of the contaminated soils. The frequent truck traffic does create localized “dust clouds” that possibly impact the drivers and/or on-site employees. This creates an occupational hazard more than an off-site environmental treat.

The possibility of air borne deposition of contaminants from historic smelting activities, as mentioned earlier in this report, was address by assessing the soils in the residential area just north of the site.

Section 6.0 Summary and Conclusion

The Taracorp Industries was initially placed on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database August of 1980. The placement was in response to long standing environmental issues at the site from years of operating as a secondary lead smelter. After these operations ceased the primary land use has been over the road tractor trailer storage and maintenance.

The residents of the city of McCook obtain drinking water from a municipal system that draws water from Lake Michigan intakes, approximately 3 miles east of the site. The groundwater pathway is not of concern at this for this site at time.

Previous investigations found that the bag house dust generated at the site was recycled back into the smelting process, and during intermediate periods of shut down, the waste

would be stored on a concrete pad in a storage shed. This operation ceased in 1979 for these reasons the air pathway is also not of concern at site.

Based on previous investigations the surface water pathway is not of concern at this site. As with the groundwater pathway, the manner by which materials were managed at the site minimized the potential for surface water to come into contact with materials containing high concentrations of metals. Also an earlier reports state that there was very low likely hood of a release to a nearby water way do to the contouring of the surface of the site. Apparently, during the operational years there were substantial berms located on the southern portion of the site near the shoreline of the first perineal water body.

The Soil Exposure Pathway is of concern at this site and has been evaluated through the use of XRF readings and soils samples both in the original operational area and in an adjacent residential area. Several on-site locations had elevated lead levels; four of these exceed the Removal Managment Level for lead. These samples were collected from depths that ranged from six inches to two feet below the grounds surface. The frequent truck traffic does create localized “dust clouds” that possibly impact the drivers and/or on-site employees. This creates a potential occupational hazard more than an off-site environmental threat. The residential samples/readings were collected from a depth of zero to three inches below the grounds surface. Several sample locations had elevated lead levels and five locations above a health based benchmark and significantly above the background level for lead.

Section 7.0 References

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United States Environmental Protection Agency. Hazard Ranking System Guidance Manual. Office of Solid Waste and Emergency Response. EPA 540-R-92-026. Document No. PB92963377. November 1992.

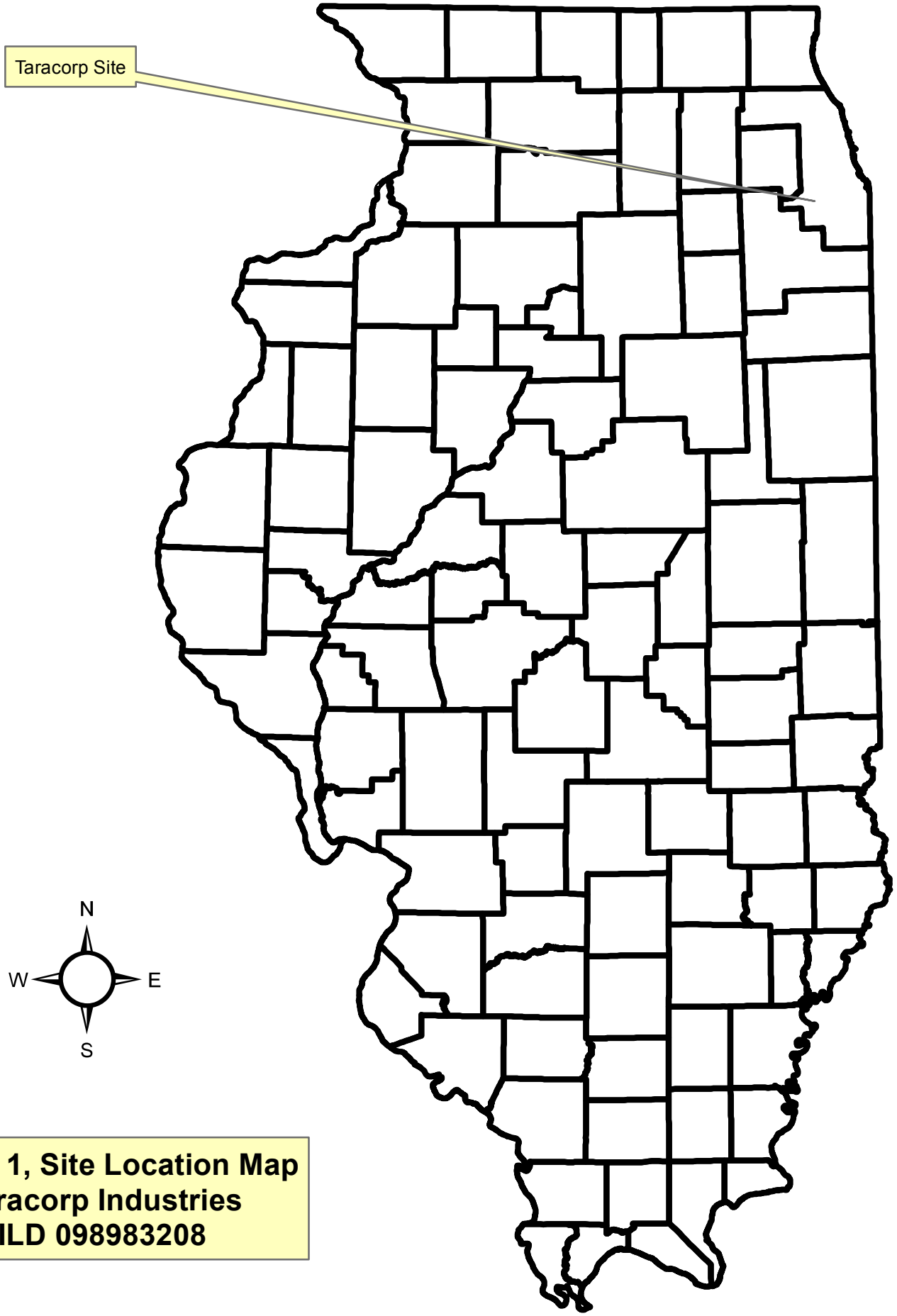


Figure 1, Site Location Map
Taracorp Industries
ILD 098983208

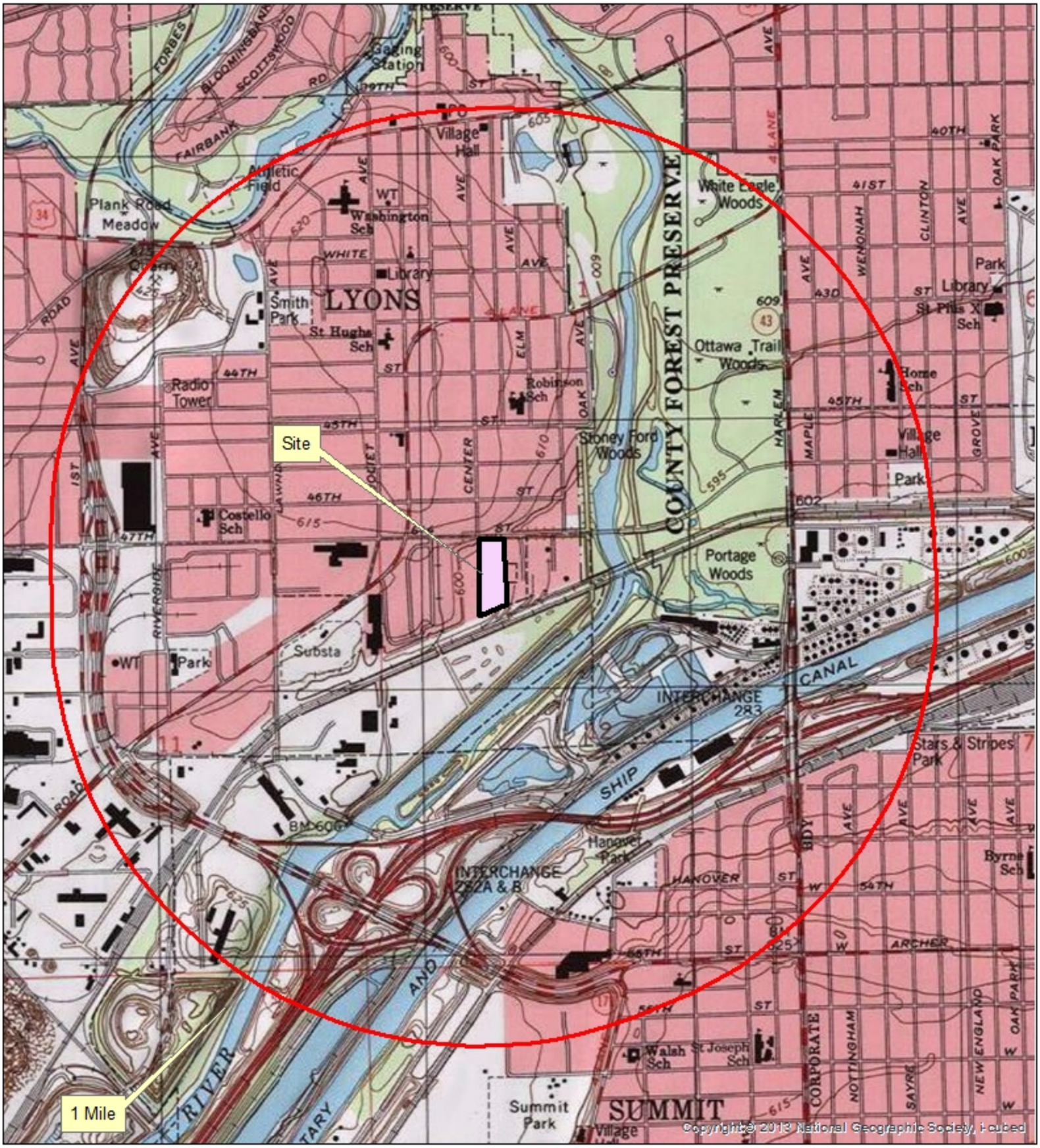


FIGURE 2
Site Area Map
Taracorp Industries
ILD 098983208

N
W E
S

0 650 1,300 2,600 3,900 5,200
Feet

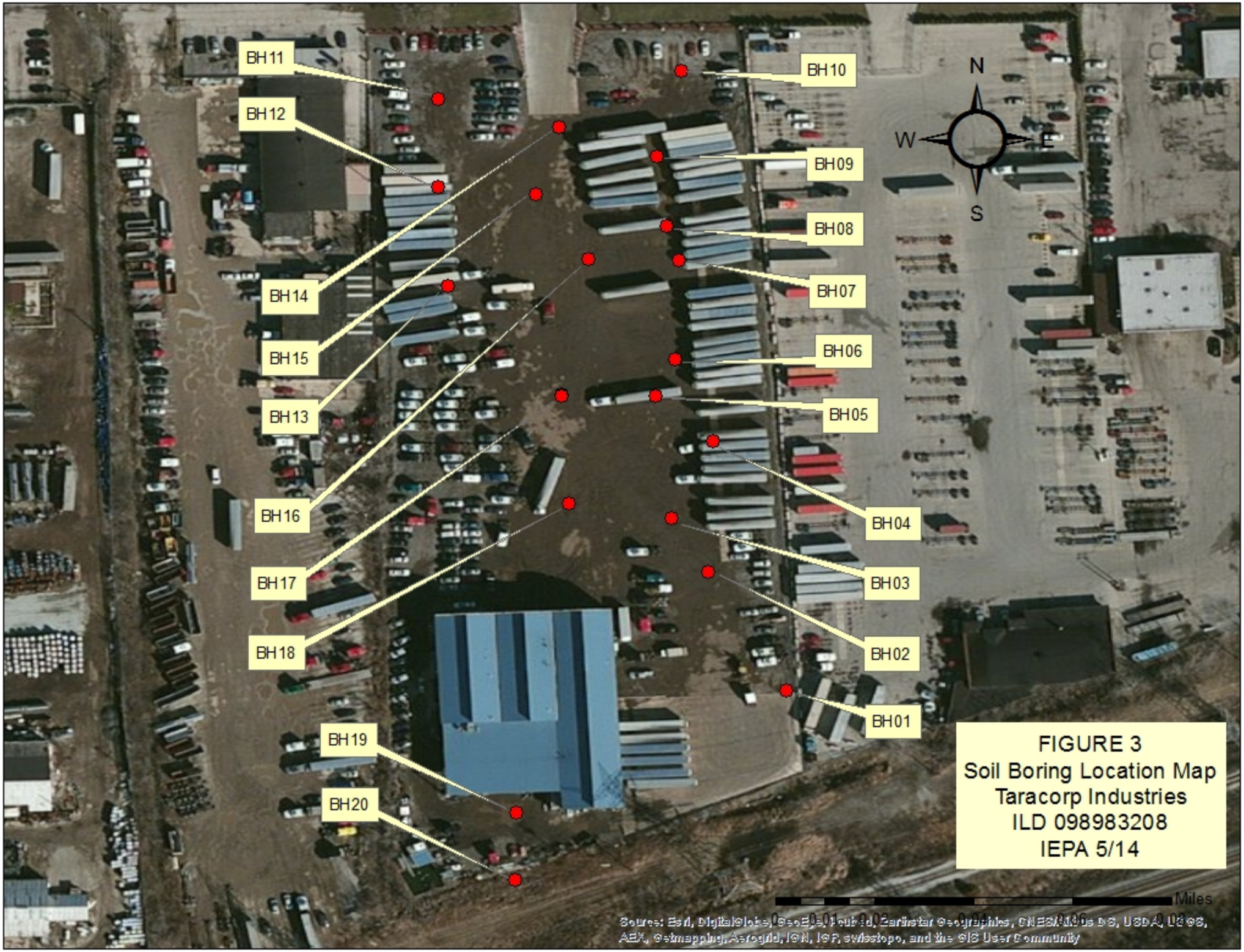


FIGURE 3
Soil Boring Location Map
Taracorp Industries
ILD 098983208
IEPA 5/14

FIGURE 4
Soil Sample Location Map
Taracorp Industries
ILD 098983208
IEPA 5/14

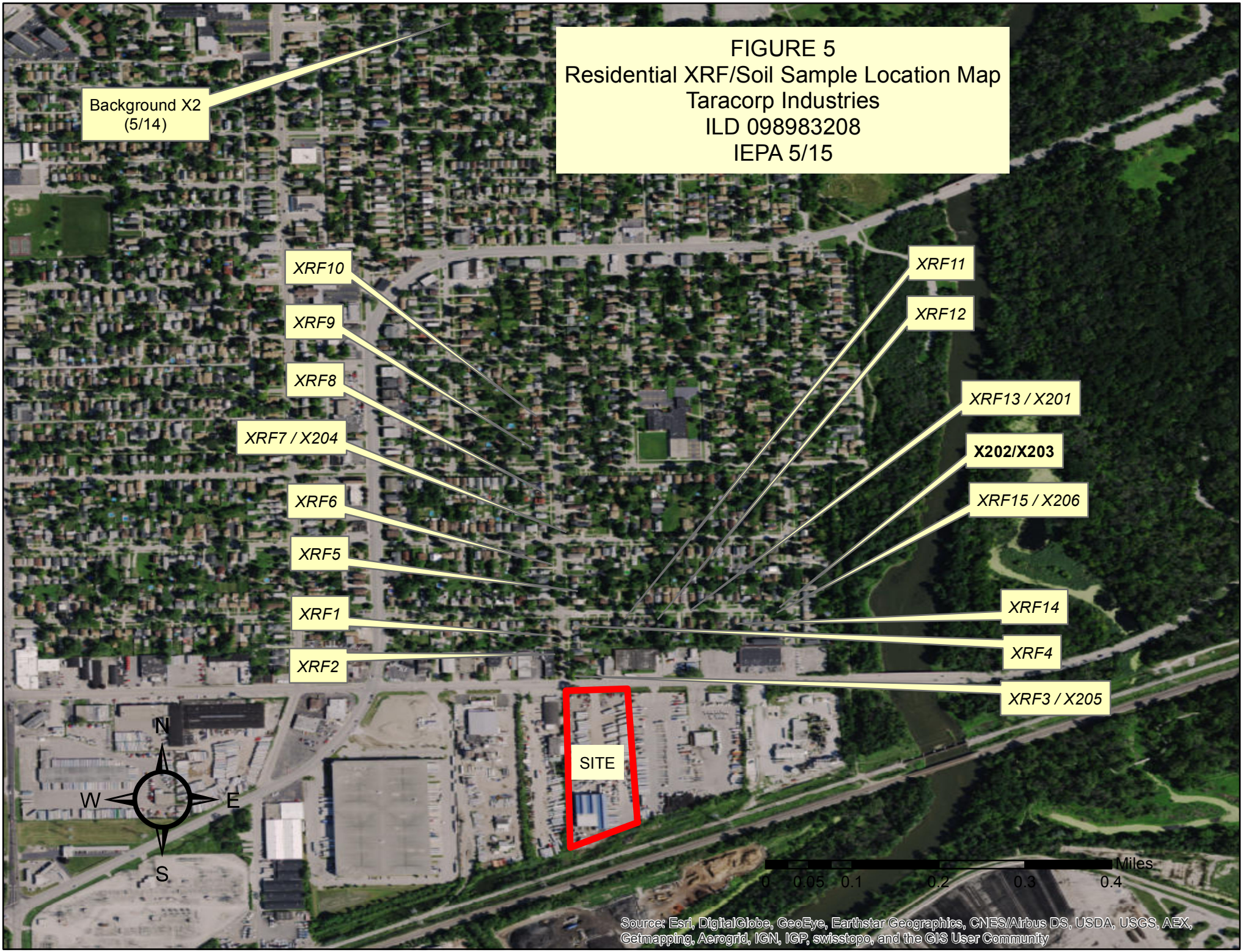
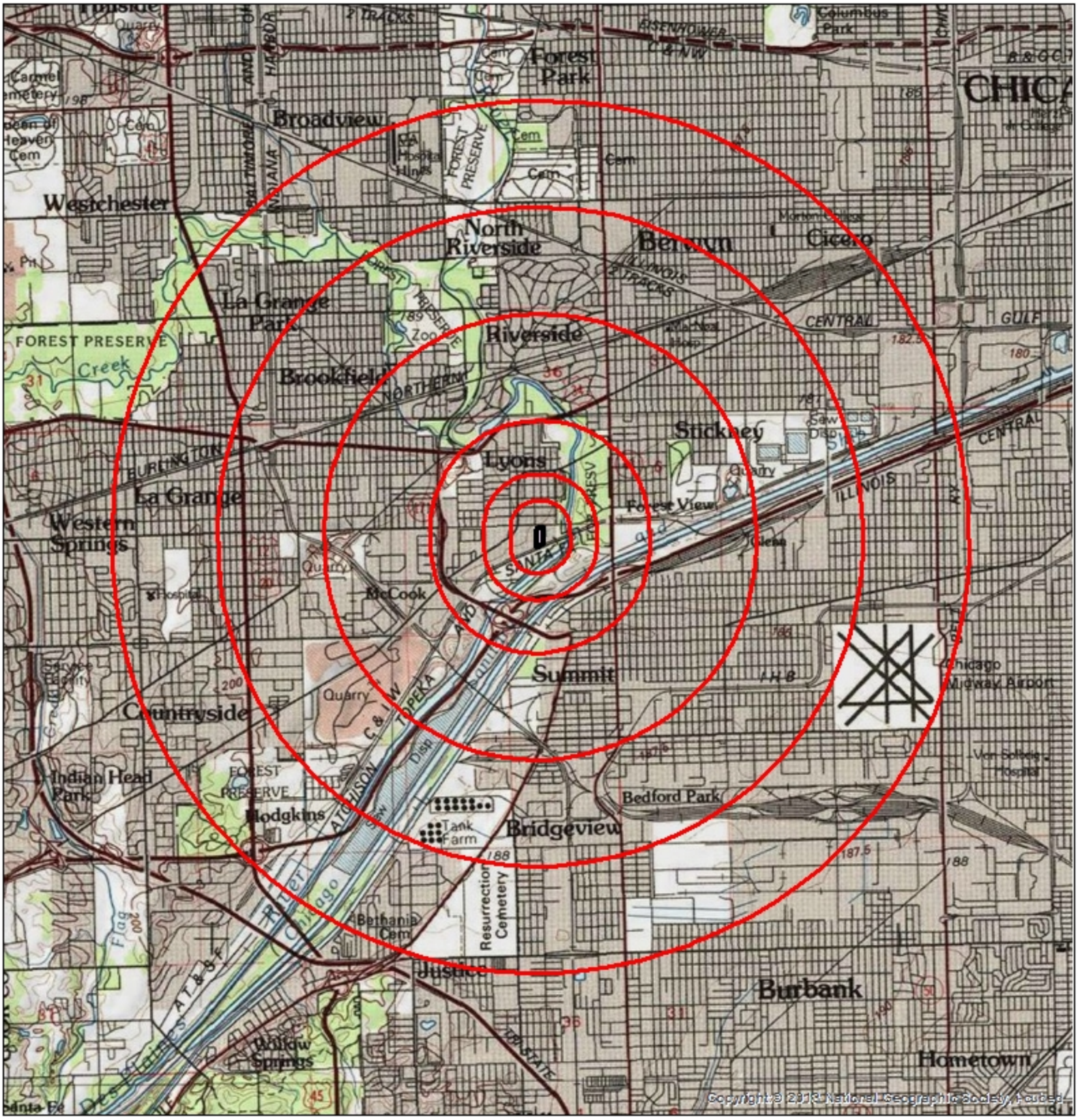


FIGURE 5
Residential XRF/Soil Sample Location Map
Taracorp Industries
ILD 098983208
IEPA 5/15
Background X2
(5/14)
XRF10
XRF9
XRF8
XRF7 / X204
XRF6
XRF5
XRF1
XRF2
XRF11
XRF12
XRF13 / X201
X202/X203
XRF15 / X206
XRF14
XRF4
XRF3 / X205
SITE
N
W
E
S
Miles
0 0.05 0.1 0.2 0.3 0.4
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

FIGURE 6
15 Mile Target Distance Limit Map
Taracorp Industries
ILD 098983208



N

FIGURE 7
4 Mile Radius Map
Taracorp Industries
ILD 098983208

0 0.5 1 2 3 4 Miles

TARACORP INDUSTRIES, ILD 09883208

Table 1, Inorganic Soil Sample Results

(On-Site Soil Borings)

IEPA, 2014

(ppm)	X101	X103	X107	X112	X114	X115	X116	X118	X120	X120A	X121	X122	X122D
Aluminum	8950	1100	3700	10800	616	9590	1160	1490	8210	10000	11500	8510	8610
Antimony	1.1	4.3	7.7	29.9	9.0	449	23.0	1.7	55.7	96.0	1.8	5.1	5.0
Arsenic	9.2	2.4	6.4	19.5	2.5	652	8.5	2.1	28.2	54.1	10.1	14.7	14.9
Barium	89.2	19.9	24.6	179	6.9	110	38.1	13.0	135	127	159	417	422
Beryllium	0.63	0.16	0.28	1.1	0.11	0.88	0.22	0.18	0.71	0.85	0.85	0.98	1.0
Cadmium	1.4	0.21	2.4	2.8	0.23	2.6	0.89	0.40	2.2	3.2	1.3	3.6	3.6
Calcium	42500	178000	215000	60400	207000	45000	156000	166000	65100	49800	32900	23200	23400
Chromium	20.7	8.9	442	27.6	2.6	23.9	118	47.7	25.4	28.2	20.4	18.4	18.5
Cobalt	11.1	1.5	2.8	10.3	0.93	24.2	2.4	1.4	11.9	13.4	8.4	7.1	7.1
Copper	36.5	5.4	17.4	56.6	4.2	93.7	19.9	8.3	97.6	83.7	31.9	89.3	91.2
Iron	20900	3630	57700	19500	1510	39900	19200	7820	26200	25600	19000	15900	16000
Lead	171	121	704*	3260*	824*	1960*	977*	137	4400*	5450*	216	204	204
Magnesium	20500	102000	60300	28800	121000	23300	78100	91600	30900	23600	17900	11400	11500
Manganese	442	283	9400	549	90.6	594	2270	1060	451	536	608	348	351
Mercury	0.16	0.097	0.098	0.12	0.089	0.19	0.10	0.094	0.12	0.27	0.14	0.13	0.13
Nickel	28.4	6.4	8.1	32.3	2.8	66.1	10.5	5.8	41.4	43.7	19.2	17.8	17.8
Potassium	1210	390	378	1430	378	1630	392	367	1390	1610	1240	1170	1180
Selenium	2.8	2.7	26.5	3.1	2.6	3.0	2.7	2.6	2.9	3.0	0.40	0.35	0.40
Silver	0.79	0.78	0.76	0.87	0.76	0.86	0.78	0.73	0.82	0.87	1.1	0.17	0.20
Sodium	631	294	344	315	263	346	309	320	372	383	392	275	281
Thallium	0.43	2.0	18.9	2.2	1.9	1.3	19.6	1.8	0.40	0.40	2.6	2.5	2.5
Vanadium	21.8	16.5	582	21.0	3.6	23.2	113	47.2	22.5	28.4	28.5	25.1	25.6
Zinc	267	23.5	58.2	809	8.6	268	61.0	26.5	396	302	150	328	333
Cyanide	0.066	0.52	0.055	0.15	0.50	0.059	0.066	0.51	0.15	0.056	0.083	0.14	0.14

= Above 800 ppm RML

*Meet Observed Release Criteria

X120A is a duplicate of X120

TARACORP INDUSTRIES, ILD 09883208

Table 2, Soil Sample Desciptions

IEPA, 2014

Sample Number	*Date/Time*	*Location*	*XRF Lead Reading/Appearance / Sampler Notes*
X101	5/21/14 @ 0700	BH 01 / 12" deep	Lead @ 1100 ppm / urban fill, gravel, asphalt mix
			tan mottled, clay (hard) w/gravel, glass
X103	5/21/14 @ 0725	BH 03 / 6" deep	Lead @ 1029 ppm / urban fill, asphalt mix
X107	5/20/14 @ 1345	BH 07 / 6" deep	Lead @ 920 ppm / dark urban cinder fill
X112	5/20/14 @ 1615	BH 12 / 12" deep	Lead @ 505 ppm / gravel, urban fill (black)
X114	5/21/14 @ 0920	BH 14 / 24" deep	Lead @ 2052 ppm / tan clay, small gravel mix, cement, cinders
X116	5/21/14 @ 1000	BH 16 / 6" deep	Lead @ 1184 ppm / urban fill, small gravel, asphalt
X118	5/21/14 @ 1100	BH 18 / 6" deep	Lead @ 1865 ppm / urban fill, asphalt, small gravel
X120	5/21/14 @ 1145	BH 20 / 12" deep	Lead @ 6960 ppm / clay, brick, cement, gravel mix
X120A	5/21/14 @ 1145	duplicate of X120	
X121	5/21/14 @ 1230	Emil Scheive Park / 0-3" deep	Dark, sandy, silty, clay
X122	5/21/14 @ 1245	Emil Scheive Park / 0-3" deep	Dark, sandy, silty, clay
X122D	5/21/14 @ 1245	duplicate of X122	

TARACORP INDUSTRIES, ILD 09883208

Table 3, Residential Soil Sample Results

IEPA, 5/2015

ANALYTE (ppm)	X122*	X3 Background	X201	QC	X202	QC	X203	QC	X204	QC	X205	QC	X206	QC
Mercury	0.13		0.13		0.09		0.10		0.10		0.11		0.15	
Cyanide	0.14		1.09		1.23	J3	1.55		2.09		1.47		1.86	
Aluminum	8510		10600		18100		17800		16400		7880		12200	
Copper	89.3		28.3		32.1		32.0		28.2		30.9		39.8	
Iron	15900		13900		19100		19500		16300		11800		14000	
Lead	204	612	851		672		664		476		970		787	
Magnesium	11400		9400		17300		17300		16200		13300		9440	
Manganese	348		274		379		410		404		335		330	
Nickel	17.8		16.7		20.8		21.4		19.2		14.5		18.5	
Potassium	1170		2030		3510		3400		2700		1190		1770	
Silver	0.17		ND		ND		ND		ND		ND		ND	
Sodium	275		1510		ND		ND		ND		629		ND	
Strontium	~		21.9		33.6		31.4		20.8		19.4		22.3	
Arsenic	14.7		26.2	B1	7.63	B1	8.16	B1	8.45	B1	7.76	B1	9.13	B1
Vanadium	25.1		23.0		34.9		34.8		31.9		21.0		27.4	
Zinc	328		195		139		129		404		150		174	
Antimony	5.1		6.16	B2, J3	6.42	B2	6.59	B2	4.57	B2	7.77	B2	7.31	B2
Selenium	0.35		2.93	B2	2.54	B2	ND	B2	ND	B2	ND	B2	ND	B2
Thallium	2.5		ND	B1	ND	B1	ND	B1	ND	B1	ND	B1	ND	B1
Barium	417		123		123		120		181		107		182	
Beryllium	0.98		ND	J3	0.31		0.41		ND		ND		ND	
Boron	~		17.4		23.9		24.9		18.2		10.4		13.9	
Cadmium	3.6		1.43		1.05		1.11		1.13		1.63		1.48	
Calcium	23200		16300		28800		28000		25600		22300		16600	
Chromium	18.4		21.0		26.3		26.5		24.2		26.6		26.3	
Cobalt	7.1		5.24		7.43		8.35		6.57		4.51		5.00	

B1	The sample matrix caused possible effects on measurement. The result may be biased low.
B2	The sample matrix caused possible effects on measurement. The result may be biased high.
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.
*	Lowest backgound levels, collected as part of the on-site sampling event.
~	No Data

TARACORP INDUSTRIES, ILD 09883208

Table 4, Residential Soil XRF/Sample Descriptions

XRF Reading/Sample #	*Date*	*XRF Lead Reading/Lab Result/Sampler Notes*		IDPH Letter *	
1	5/7/2015	Lead @ XRF 238 ppm			
		clay/silt, sand	0-3"		
2	5/7/2015	Lead @ XRF 638 ppm		Resident 05	Above Removal Management Level
		clay/silt, sand	0-3"		Meets Observed Release Criteria
3 / X205	5/7/2015	Lead @ XRF 686 ppm / Lab 970 ppm		Resident 03	Above Removal Management Level
		clay/silt, sand, black	0-3"		Meets Observed Release Criteria
4	5/7/2015	Lead @ XRF 274 ppm			
		clay/silt, sand, black	0-3"		
5	5/7/2015	Lead @ XRF 351 ppm			
		clay/silt, sand, black	0-3"		
6	5/7/2015	Lead @ XRF 179 ppm			
		clay/silt, sand, black	0-3"		
7 / X204	5/7/2015	Lead @ XRF 307 ppm / Lab 476 ppm		Resident 01	Above Removal Management Level
		clay/silt, sand, black	0-3"		
8	5/7/2015	Lead @ XRF 157 ppm			
		clay/silt, sand, black	0-3"		
9	5/7/2015	Lead @ XRF 264 ppm			
		clay/silt, sand, black	0-3"		
10	5/7/2015	Lead @ XRF 177 ppm			
		clay/silt, sand, black	0-3"		
11	5/7/2015	Lead @ XRF 386 ppm			
		clay/silt, sand, black	0-3"		
12	5/7/2015	Lead @ XRF 507 ppm		Resident 07	Above Removal Management Level
		clay/silt, sand, black	0-3"		
13 / X201	5/7/2015	Lead @ XRF 541 ppm / Lab 851 ppm		Resident 04	Above Removal Management Level
		clay/silt, sand, black	0-3"		Meets Observed Release Criteria
X202/203	5/7/2015	Lead @ XRF (N/A) / Lab 672/664 ppm		Resident 06	Above Removal Management Level
			0-3"		Meets Observed Release Criteria
14	5/7/2015	Lead @ XFR 209 ppm			
		clay/silt, sand, black	0-3"		
15 / X206	5/7/2015	Lead @ XRF (N/A) / Lab 786 ppm		Resident 02	Above Removal Management Level
			0-3"		Meets Observed Release Criteria
X122	5/21/2014	Lead @ XRF (N/A) Lab 204 ppm			
		background soil sample	0-3"		

* See: IDPH Resdintial Address Key Table.

APPENDIX A.

IDPH

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www.dph.illinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 01
[redacted]
Lyons, IL 60534

Dear Resident:

On May 7, 2015, soil in your yard along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead in your yard. In addition, a soil sample was also collected from your property and sent to a laboratory for lead analysis. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF and lab results from your yard and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead level in the samples from the right of way on your property was 307 ppm using the XRF and 476 ppm by laboratory analysis. Based on the laboratory result the levels of the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you may wish to reduce their exposure to bare soil. The IDPH fact sheet "How Can I Reduce My Exposure to Contaminants in Soil" is enclosed with this letter.

IEPA conducted the recent soil investigation in the vicinity of the Taracorp Industries site located on the south side of 47th Street near the intersection of Center Avenue and 47th Street. If you have questions regarding the investigation, please contact the Illinois EPA project manager Mark Wagner at 217-524-1662, Mark.WagnerAillinois.gov.

If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sincel ely,

--

David R. Webb
Environmental Toxicologist

cc Mark Wagner. IEPA
Division of Environmental Health
Edwardsville Regional Office

IDPH

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www.dph.illinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 02
[redacted]
Lyons, IL 60534

Dear Owner:

On May 7, 2015, a soil sample from your property was collected along the right of way by the Illinois Environmental Protection Agency (IEPA). The soil sample was sent to a laboratory for lead analysis. IEPA requested that the Illinois Department of Public Health (IDPH) review the laboratory results from your property and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead level in the samples from the right of way on your property was 786 ppm by laboratory analysis. Based on the laboratory results the level of the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you may wish to reduce their exposure to bare soil. The IDPH fact sheet "How Can I Reduce My Exposure to Contaminants in Soil" is enclosed with this letter.

IEPA conducted the recent soil investigation in the vicinity of the Taracorp Industries site located on the south side of 47th Street near the intersection of Center Avenue and 47th Street. If you have questions regarding the investigation, please contact the Illinois EPA project manager Mark Wagner at 217-524-1662, Mark.Wagnerillinois.gov.

If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

)
David R. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Envimnmental Health
Edwardsville Regional Office

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www.dph.illinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 03
[redacted]
Lyons, IL 60534

Dear Resident:

On May 7, 2015, soil in your yard along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead in your yard. In addition, a soil sample was also collected from your property and sent to a laboratory for lead analysis. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF and laboratory results from your yard and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead levels in the samples collected from the right of way on your property were 686 ppm by XRF analysis and 970 ppm by laboratory analysis. Based on these levels the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you should reduce their exposure to bare soil in your yard. Reducing exposure to lead in soil can be accomplished by using good hygiene habits, practicing good housekeeping techniques, creating barriers to contaminated soil, and preventing your children from playing or digging in contaminated soil. The steps to reducing exposure to lead in soil are discussed in greater detail in the attached fact sheet "How Can I Reduce My Exposure to Contaminants in Soil". In addition, you may consider having any children that are six years old and younger and spend much of their time (especially outdoors) at your home have their blood tested for lead. Testing these children is the only way to determine their lead exposure. A venipuncture sample, one that is collected from the vein, is more accurate in determining blood lead concentrations and is preferable to a fingerstick or capillary sample.

IEPA conducted the recent soil investigation in the vicinity of the Taracorp Industries site located on the south side of 47th Street near the intersection of Center Avenue and 47th Street. If you have questions regarding the investigation, please contact the Illinois EPA project manager Mark Wagner at 217-5241662, Mark.WagnerAillinois.gov.

If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sincerely,

David R. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Environmental Health
Edwardsville Regional Office

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www.dph.iilinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 04
[redacted]
Lyons, IL 60534

Dear Resident:

On May 7, 2015, soil in your yard along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead in your yard/on your property. In addition, a soil sample was also collected from your property and sent to a laboratory for lead analysis. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF and laboratory results from your yard and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per grain. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead levels in the samples collected from the right of way on your property were 541 ppm by XRF analysis and 851 ppm by laboratory analysis. Based on these levels the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you should reduce their exposure to bare soil in your yard. Reducing exposure to lead in soil can be accomplished by using good hygiene habits, practicing good housekeeping techniques, creating barriers to contaminated soil, and preventing your children from playing or digging in contaminated soil. The steps to reducing exposure to lead in soil are discussed in greater detail in the attached fact sheet "How Can I Reduce My Exposure to Contaminants in Soil". In addition, you may consider having any children that are six years old and younger and spend much of their time (especially outdoors) at your home have their blood tested for lead. Testing these children is the only way to determine their lead exposure. A venipuncture sample, one that is collected from the vein, is more accurate in determining blood lead concentrations and is preferable to a fingerstick or capillary sample.

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If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sincerely,

David R. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Environmental Health
Edwardsville Regional Office

-4f IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www,dph.illinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 05
[redacted]
Lyons, IL 60534

Dear Owner:

On May 7, 2015, soil on your property along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead on your property. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF result from your property and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead level in the sample from the right of way on your property was 638 ppm. Based on this level the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you may wish to reduce their exposure to bare soil. The IDPH fact sheet "How Can I Reduce My Exposure to Contaminants in Soil" is enclosed with this letter.

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If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sinc‘ely,

Davi 12. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Environmental Health
Edwardsville Regional Office

IDPH

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034-2801 • www.dph.illinois.gov

August 20, 2015

Environmental Toxicology # 9071015011-I

Resident 06
[redacted]
Lyons, IL 60534

Dear Resident:

On May 7, 2015, soil in your yard along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead in your yard. In addition, a soil sample was also collected from your property and sent to a laboratory for lead analysis. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF and laboratory results from your yard and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead level in the samples from the right of way on your property was 436 ppm using the XRF and 672 ppm and 664 ppm by laboratory analysis. Based on the XRF and laboratory results the levels the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you may wish to reduce their exposure to bare soil. The IDPH fact sheet "How Can I Reduce My Exposure to Contaminants in Soil" is enclosed with this letter.

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If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sincerely,

David R. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Environmental Health
Edwardsville Regional Office

IDPH

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

22 Kettle River Drive • Glen Carbon, Illinois 62034 2801 • www.dph.illinois.gov

August 20, 2015

Environmental Toxicology # 907101501H

Resident 07
[redacted]
Lyons, IL 60534

Dear Resident:

On May 7, 2015, soil in your yard along the right of way was tested by the Illinois Environmental Protection Agency (IEPA) using an X-Ray Fluorescence (XRF) device. The XRF measured the level of lead in your yard. IEPA requested that the Illinois Department of Public Health (IDPH) review the XRF reading from your yard and contact you with our recommendations based on those samples.

The IDPH Lead Poisoning Prevention Code has two regulatory limits for children exposed to lead in soil. These regulatory limits apply to children with elevated blood lead levels, but are used as guidelines for all children. The regulatory limit of lead in bare soil that is readily accessible to children shall be 400 micrograms per gram. The regulatory limit of lead in other bare soil areas shall be 1000 micrograms per gram. Micrograms per gram is equivalent to parts per million (ppm).

The soil lead level in the sample from the right of way on your property was 507 ppm. Based on the XRF result the levels the lead in soil may pose a health hazard to young children who regularly come into direct contact with this soil. A sample collected in the right of way near the street would not be expected to be an area readily accessible to children. If young children reside or regularly visit this address you may wish to reduce their exposure to bare soil. The IDPH fact sheet "How Can I Reduce My Exposure to Contaminants in Soil" is enclosed with this letter.

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If you have any questions regarding the health effects of lead, exposure to lead, or blood lead testing, please contact me at the Edwardsville Regional Office, 22 Kettle River Drive, Glen Carbon, IL 62034, telephone 618-656-6680.

Sincerely,

David R. Webb
Environmental Toxicologist

cc Mark Wagner, IEPA
Division of Environmental Health
Edwardsville Regional Office